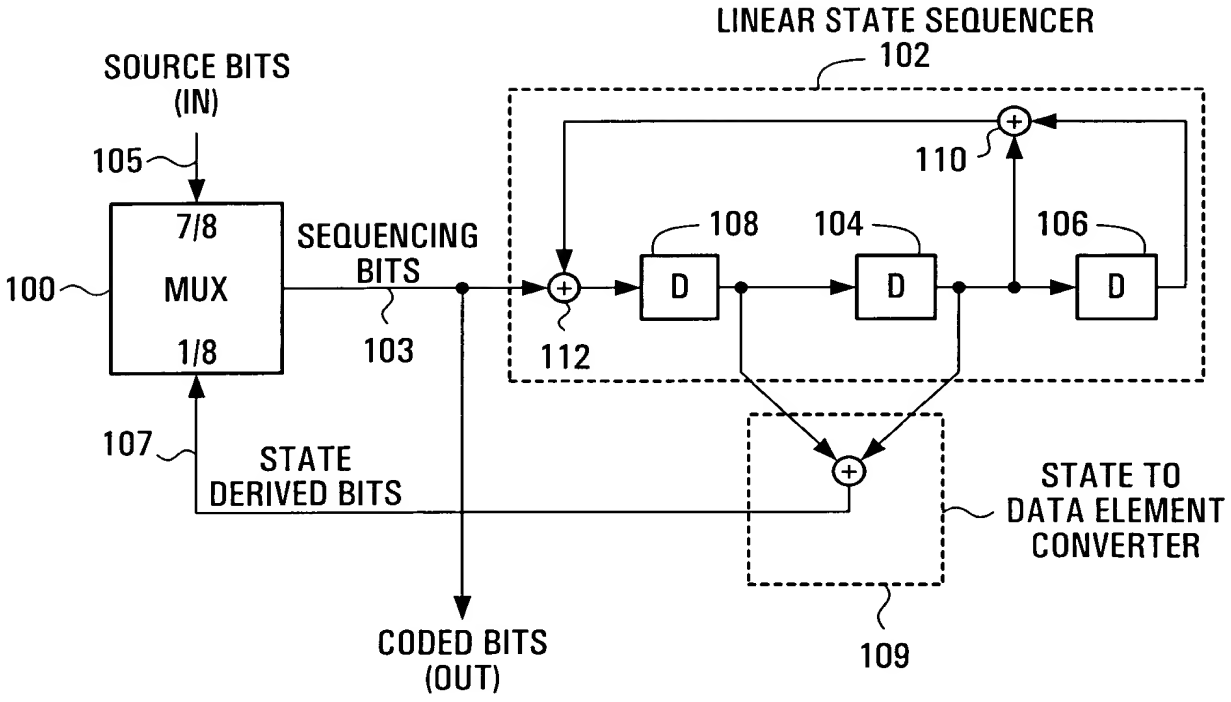

LINEAR STATE SEQUENCER
102
SOURCE BITS
(IN)
105
7/8
MUX
1/8
100
SEQUENCING
BITS
103
107
STATE
DERIVED BITS
112
110
108
104
106
D
D
D
STATE TO
DATA ELEMENT
CONVERTER
109
CODED BITS
(OUT)

FIG. 1

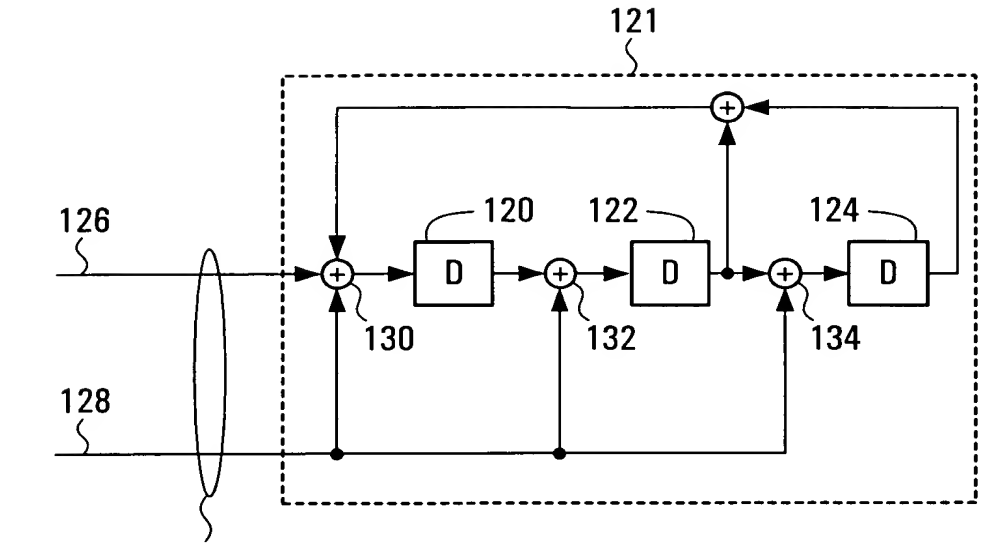


FIG. 2

EP 0 957 598 A2

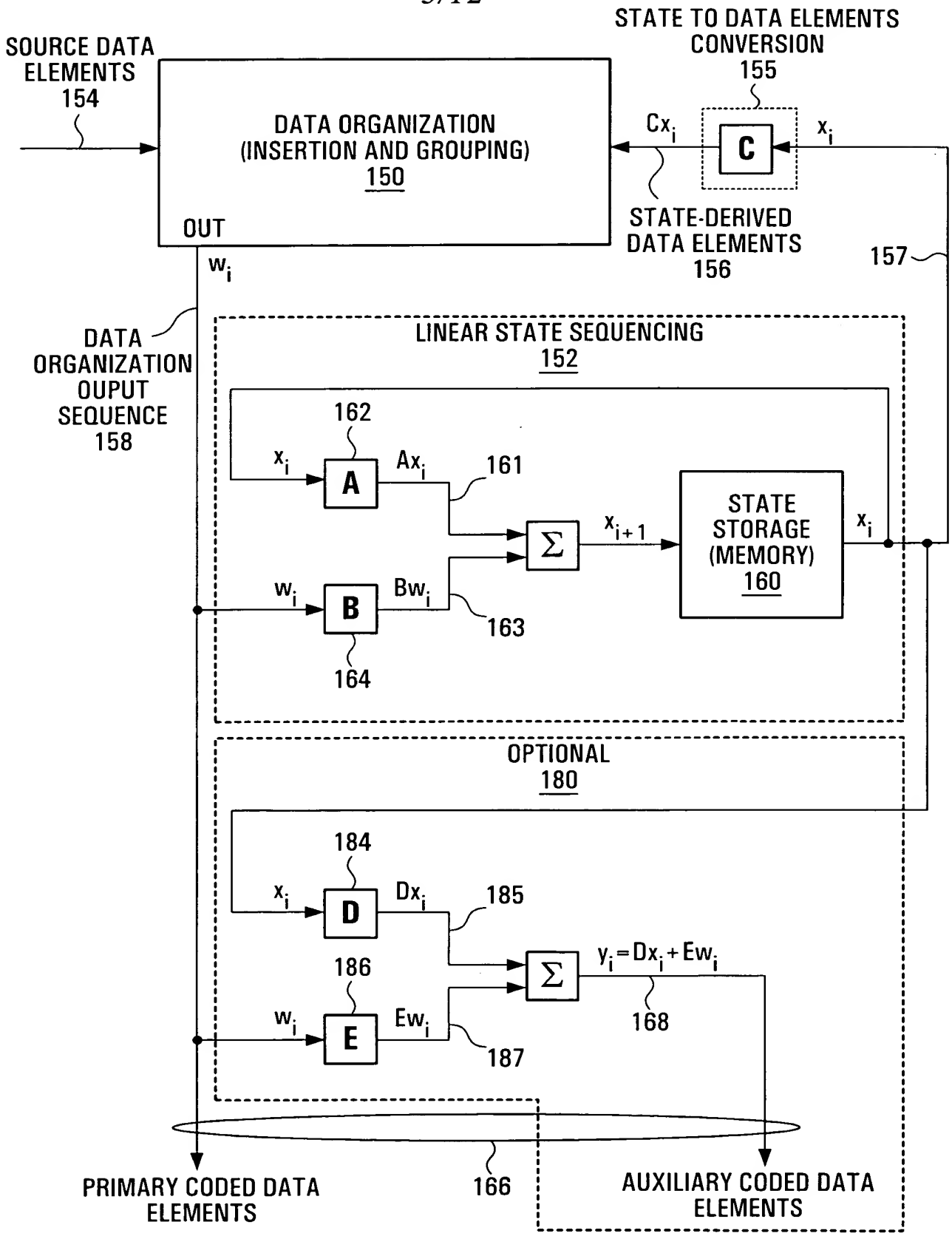

SOURCE DATA ELEMENTS 154
DATA ORGANIZATION (INSERTION AND GROUPING) 150
OUT
STATE TO DATA ELEMENTS CONVERSION 155
Cx_i
C
x_i
STATE-DERIVED DATA ELEMENTS 156
157
w_i
DATA ORGANIZATION OUPUT SEQUENCE 158
LINEAR STATE SEQUENCING 152
162
x_i
A
Ax_i
161
Σ
x_i+1
STATE STORAGE (MEMORY) 160
x_i
w_i
B
Bw_i
163
164
OPTIONAL 180
184
x_i
D
Dx_i
185
186
w_i
E
Ew_i
187
Σ
y_i = Dx_i + Ew_i
168
166
PRIMARY CODED DATA ELEMENTS
AUXILIARY CODED DATA ELEMENTS

FIG. 3

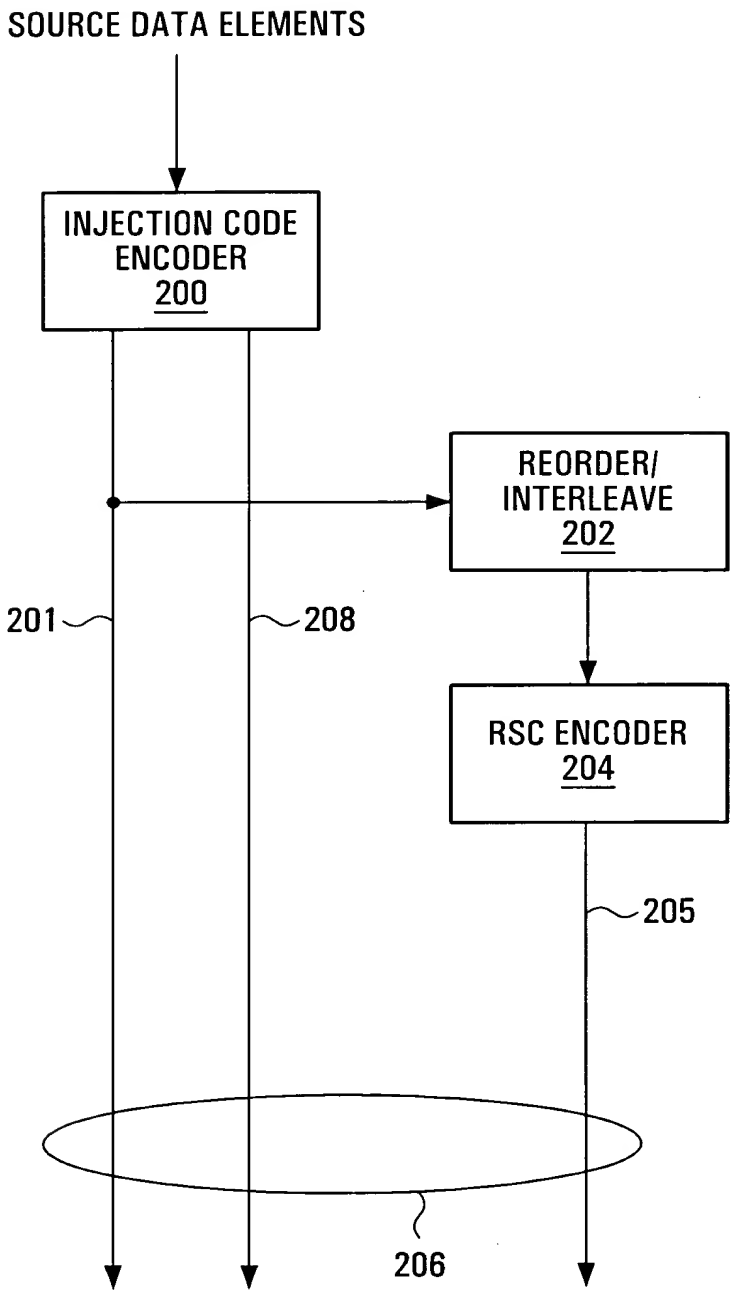

SOURCE DATA ELEMENTS
INJECTION CODE ENCODER 200
REORDER/ INTERLEAVE 202
RSC ENCODER 204
201
208
205
206

FIG. 4

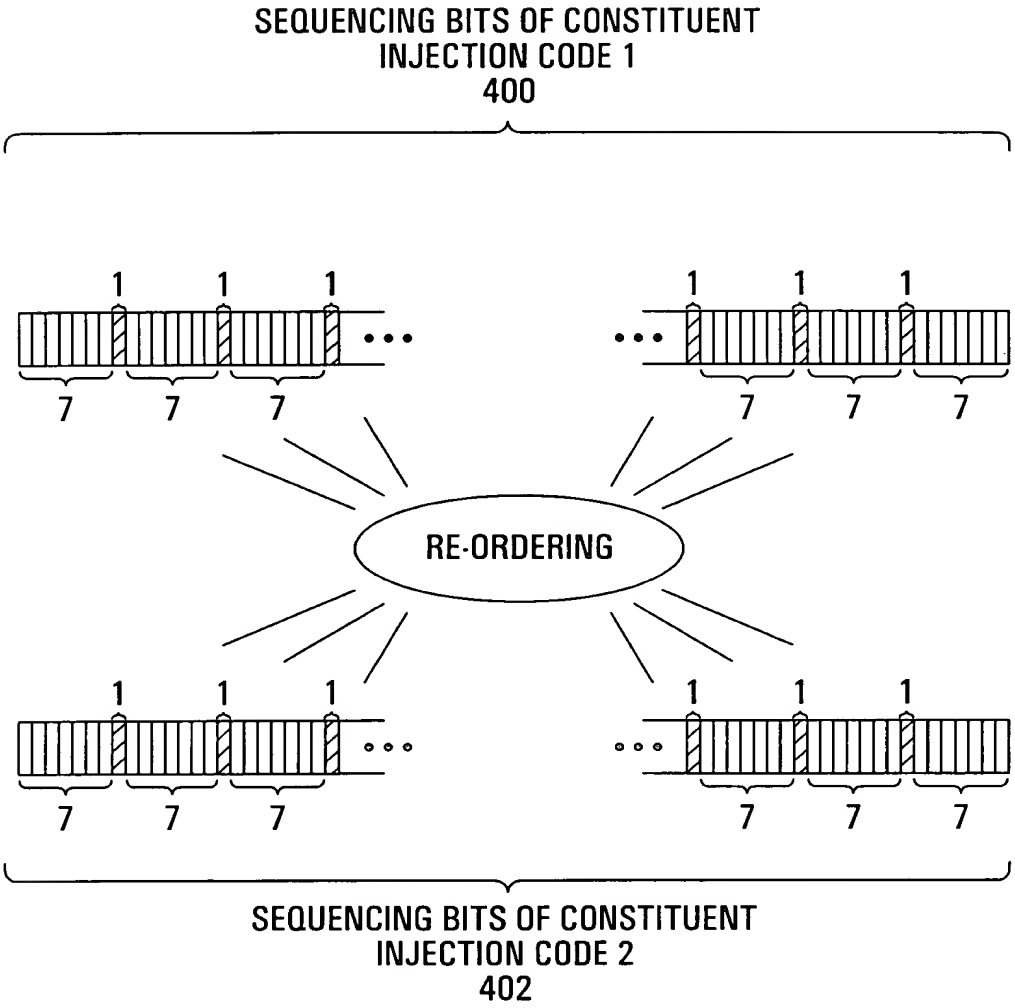


FIG. 5

US 6,985,534 B2

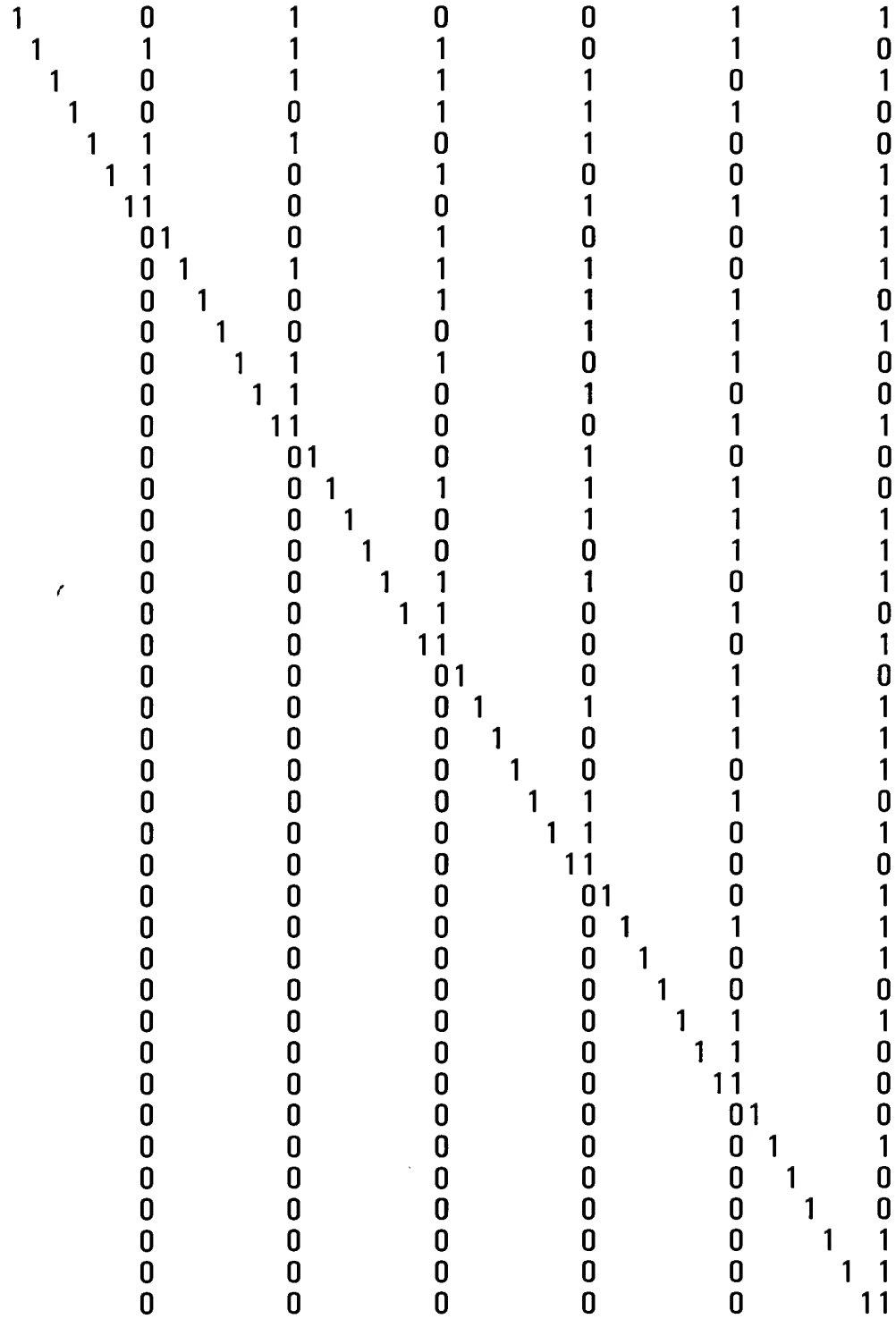


FIG. 6

EP 0 950 954 A2

```
[ 0100111000000000000000000000000000000000000001          ]
[ 1110100010011100000000000000000000000000000000  1       ]
[ 0111010111010001001110000000000000000000000000    1     ]
[ 0011101011101011101000100111000000000000000000      1   ]
[ 1101001001110101110101110100010011100000000        1     ]
[ 1010011110100100111010111010111010001001111          1 ]
```

FIG. 7

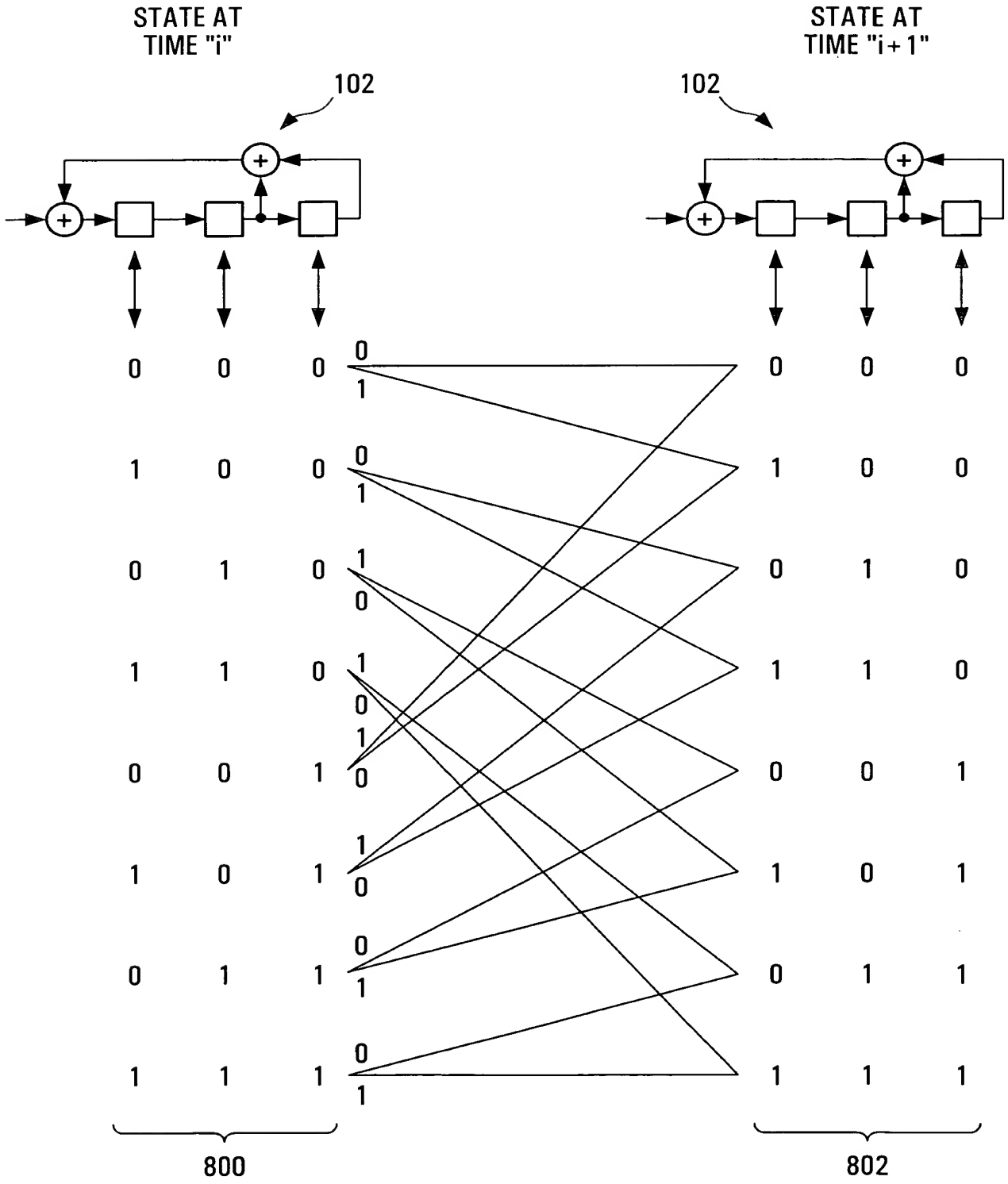

STATE AT TIME "i"
STATE AT TIME "i+1"
102
102
0 0 0
1 0 0
0 1 0
1 1 0
0 0 1
1 0 1
0 1 1
1 1 1
0 1
0 1
1 0
1 0
1 0
1 0
0 1
0 1
800
802

FIG. 8A

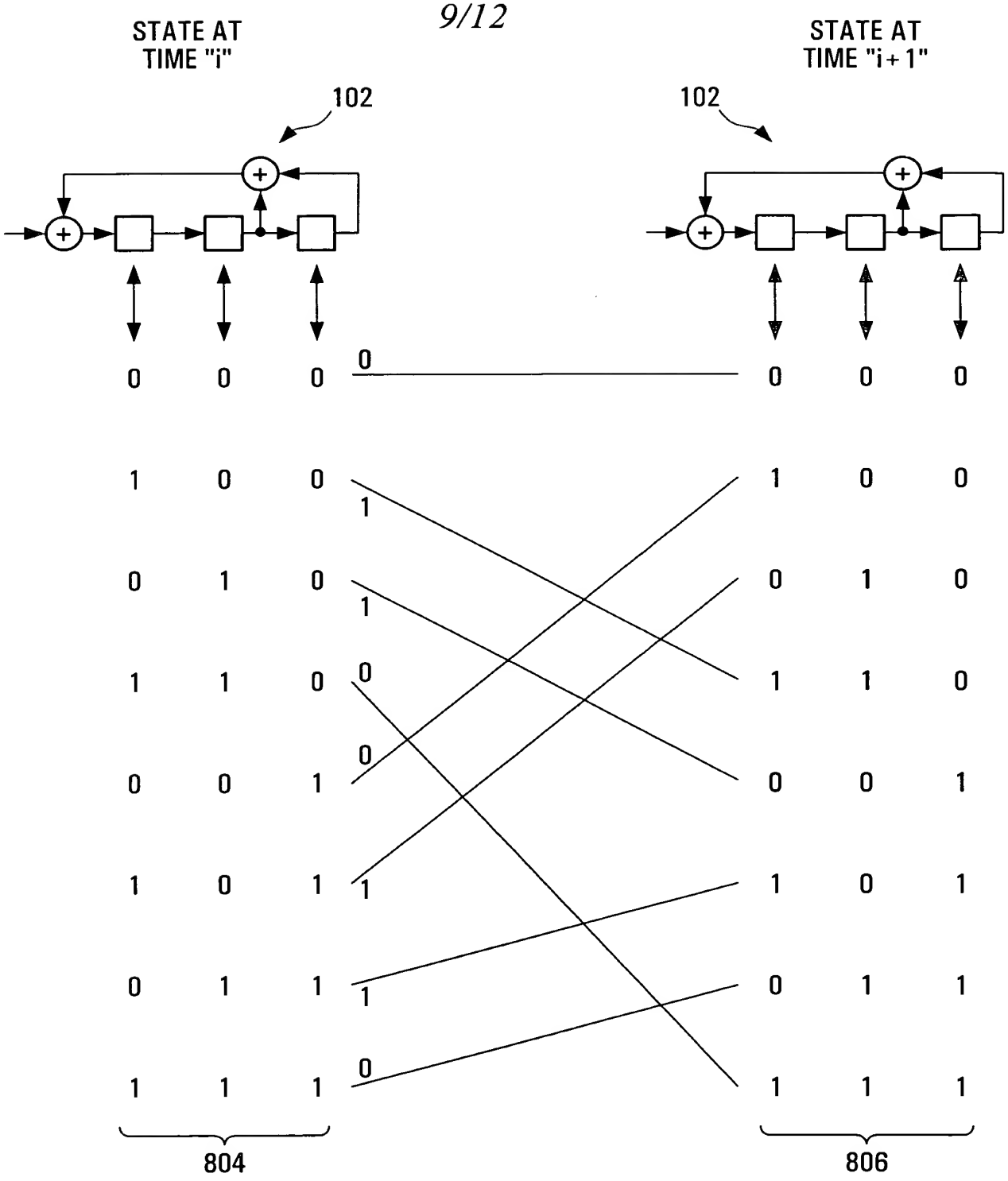

STATE AT TIME "i"
STATE AT TIME "i+1"
102
102
0 0 0
1 0 0
0 1 0
1 1 0
0 0 1
1 0 1
0 1 1
1 1 1
0
1
1
0
0
1
1
0
804
806

FIG. 8B

FIG. 9 of 9

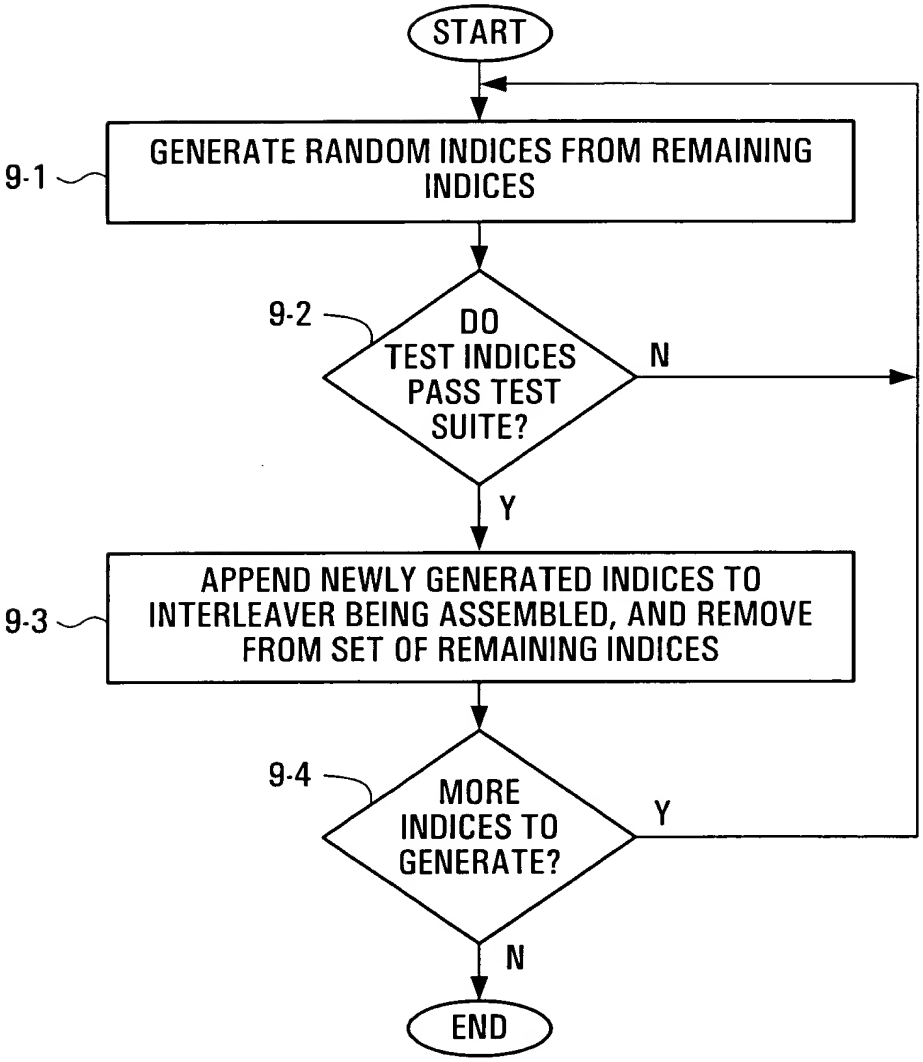


FIG. 9

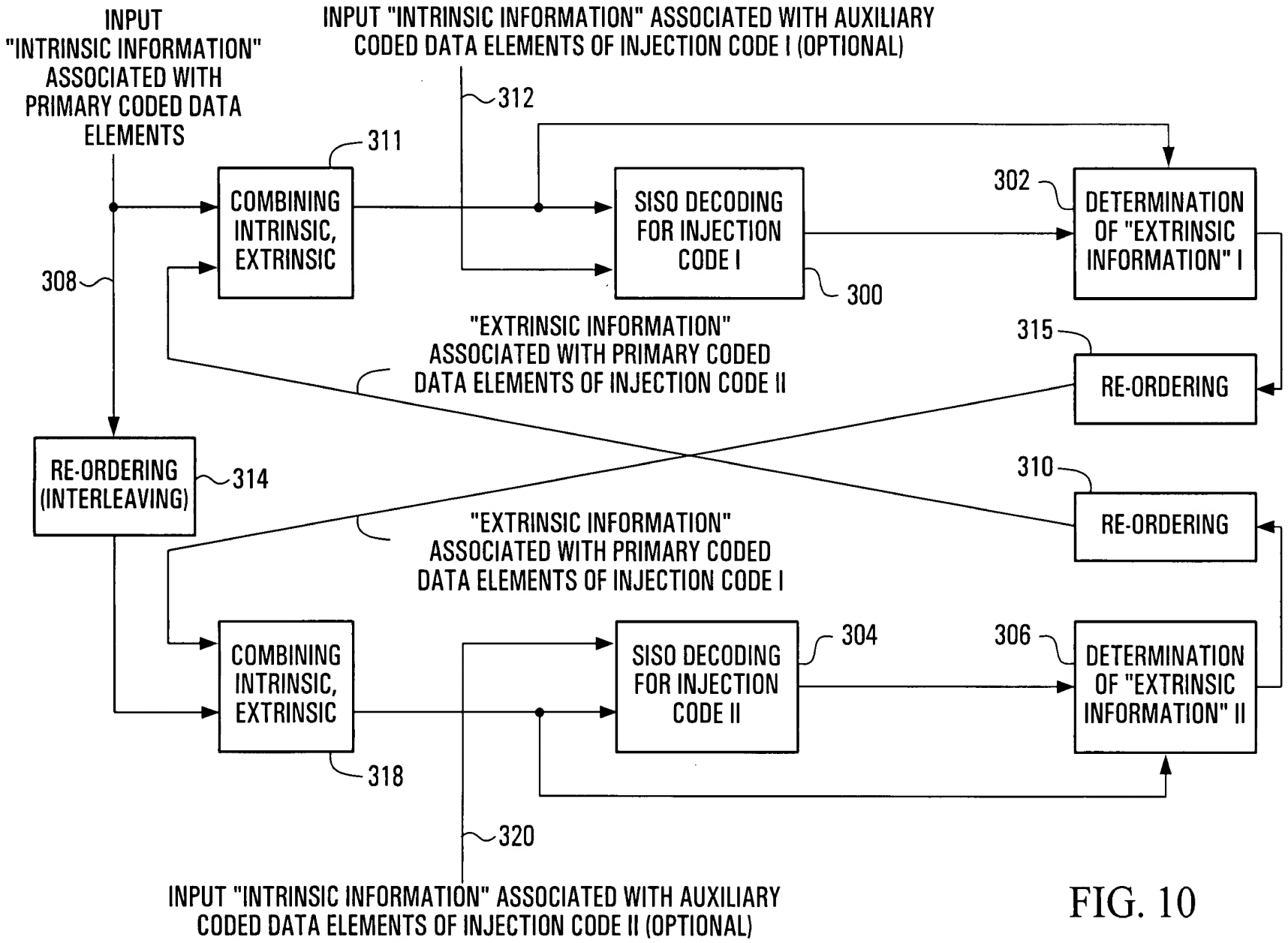
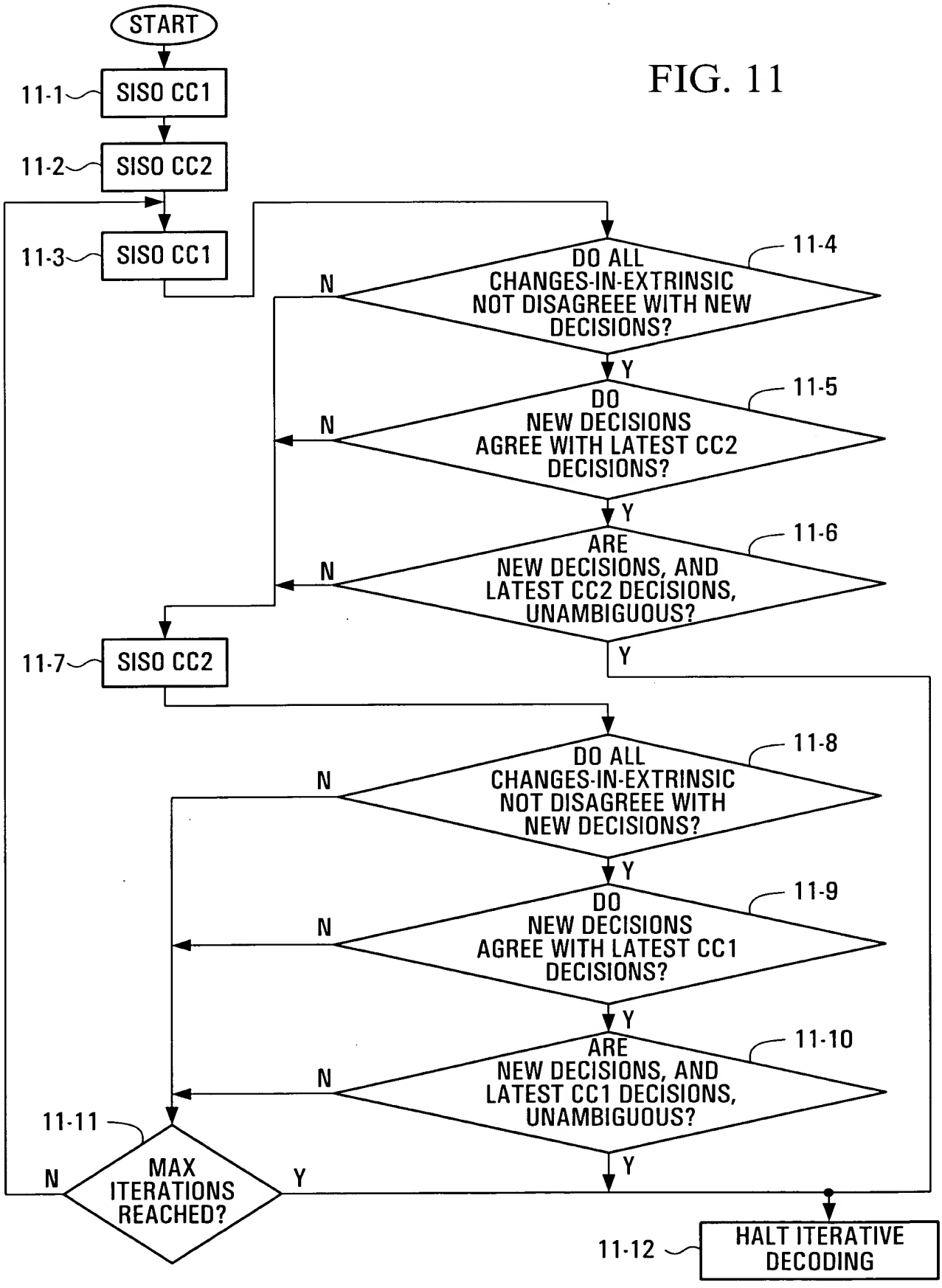

INPUT "INTRINSIC INFORMATION" ASSOCIATED WITH PRIMARY CODED DATA ELEMENTS
INPUT "INTRINSIC INFORMATION" ASSOCIATED WITH AUXILIARY CODED DATA ELEMENTS OF INJECTION CODE I (OPTIONAL)
312
311
COMBINING INTRINSIC, EXTRINSIC
SISO DECODING FOR INJECTION CODE I
300
302
DETERMINATION OF "EXTRINSIC INFORMATION" I
308
"EXTRINSIC INFORMATION" ASSOCIATED WITH PRIMARY CODED DATA ELEMENTS OF INJECTION CODE II
315
RE-ORDERING
RE-ORDERING (INTERLEAVING)
314
310
RE-ORDERING
"EXTRINSIC INFORMATION" ASSOCIATED WITH PRIMARY CODED DATA ELEMENTS OF INJECTION CODE I
COMBINING INTRINSIC, EXTRINSIC
SISO DECODING FOR INJECTION CODE II
304
306
DETERMINATION OF "EXTRINSIC INFORMATION" II
318
320
INPUT "INTRINSIC INFORMATION" ASSOCIATED WITH AUXILIARY CODED DATA ELEMENTS OF INJECTION CODE II (OPTIONAL)

FIG. 10

FIG. 11



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